

May 11, 2005

Ms. Jennifer Carey
JLC Environmental Consultants, Inc.
30 West 26th Street, 4th floor
New York, N.Y. 10010

Dear Ms. Carey:

Enclosed are the United States Environmental Protection Agency's (EPA) comments on the following documents for 130 Cedar Street prepared by JLC Environmental Consultants, Inc. (JLC), for Masterworks Development Corporation (Masterworks): Air Sampling and Monitoring Protocol (Air Protocol); Building Survey Report; Dust Sample Report; Asbestos Abatement Specifications; Ceiling Skimcoat Asbestos Report; Lead Paint Abatement Specifications; NYCDEP Filings (Asbestos Variance Application); Asbestos Abatement Drawings; Architectural Specifications; and Drawings (Selective Demolition & Facade Restoration). EPA's comments address, among other things, implementation of best management practices for all areas of the work during abatement and deconstruction and development of a comprehensive air monitoring program to intercept and address releases.

Extensive damage to the building at 130 Cedar Street, resulting from the collapse of the World Trade Center (WTC) towers, was documented by the Federal Emergency Management Agency (FEMA) in the May 2002 WTC Building Performance Study. Due to the damage incurred at 130 Cedar Street, and the levels of contamination measured in buildings similarly damaged, 130 Cedar Street may potentially be contaminated both inside and outside with WTC dust and debris containing asbestos, lead, and other hazardous substances and contaminants. Safeguards for the prevention of releases into the environment of such hazardous substances and contaminants during the abatement and deconstruction process must be employed to prevent an imminent and substantial endangerment to public health and the environment. EPA's principal objective in assessing the specifications for the abatement and deconstruction work is to identify instances where safeguards against such potential releases must be strengthened.

After incorporating the recommended changes attached hereto and providing clarity to the proposed specifications based on these regulatory comments, the revised and updated documents should be resubmitted to EPA and the other regulatory agencies for final review as to their acceptability prior to the start of abatement and deconstruction work.

If you have any questions please feel free to contact Mr. Emmet C. Keveney, P.E., of my staff, at 212-637-3459.

Sincerely,

/s/

Pat Evangelista
WTC Coordinator
New York City Response and Recovery Operations

cc: Sal Carlomagno, NYSDEC w/attach.
Chris Alonge, NYSDOL w/attach.
Krish Radhakrishnan, NYCDEP w/attach.
Richard Mendelson, OSHA w/attach.
Robert Iulo, NYCDOB w/attach.
Chris Colbourne, Masterworks w/attach.
Lech Gorecki, Laval Construction w/attach.

bcc: Phil Flax, DECA-RCB w/attach.
Kenneth Fradkin, DEPP-APB w/attach.
Bob Fitzpatrick, DECA-ACB w/attach.
Beverly Kolenberg, ORC-NYCSF w/attach.
Bob Hazen, ORC-WTSB w/attach.
Emmet Keveney, NYCRRO w/attach.

**130 Cedar Street
Masterworks Development Corp.**

U.S. Environmental Protection Agency Comments

A. General Comments:

(1) The documentation provided by Masterworks Development Corporation's (Masterworks) consultant, JLC Environmental Consultants, Inc. (JLC), does not clarify the nature and scope of the abatement/removal of WTC dust and debris from the building; and, what, if any, controls Masterworks intends to utilize to prevent any releases of WTC dust/debris, and other hazardous contaminants, which may endanger public health and the environment. Please provide such clarification.

(2) Based on a review of the documentation submitted, a deconstruction plan should be submitted which incorporates details on: (a) summary of known contaminants for 130 Cedar Street, (b) inventory of building components (e.g., fluorescent light ballasts and other PCB-containing equipment that would be subject to PCB regulations, mercury switches, refrigerants, batteries, used oil/lubricants, doors, raised flooring, HVAC, carpeting, fiberglass insulation, etc.) that specifies what will be cleaned and removed or cleaned and will remain in-place, (c) hazardous waste management and disposal, (d) emergency action/response plans, (e) quality assurance/quality control (QA/QC), and (f) health and safety plans. Any health and safety plan should identify the responsibilities of the Health and Safety Officer (HSO), or equivalent, regarding emission control, including monitoring of visible emissions, and ensuring adherence to best management practices. This additional information should provide a schedule showing the sequence of work and total time for completion of each activity to facilitate an understanding of the scope of the work for 130 Cedar Street. To the extent that such information has not been provided to date, EPA requests that JLC and Masterworks forward it promptly. EPA reserves its right to comment on additional information at a subsequent date. EPA also reserves its right to make additional comments on the Air Sampling and Monitoring Protocol (Air Protocol) since additional information being provided by JLC and Masterworks may impact the specifications for the Air Protocol.

(3) The Dust Sample Report appears to provide information only about asbestos and does not provide any other information on the contents of the dust that may potentially contain WTC dust and debris. Further, this report indicates that inspection and sampling was limited to interior dust/debris on the floors and window sills within the building. The Summary of Analytical Results specifies that the analysis conducted on the dust for asbestos, Polarized Light Microscopy (PLM), is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.

(a) In order to characterize the interior and exterior of 130 Cedar Street and to gauge the potential for release(s) to the environment, transmission electron microscopy (TEM) analysis of the bulk dust will be necessary for determining the amount of asbestos contained in the dust/debris found inside and outside of the 130 Cedar Street building.

(b) In order to characterize the interior and exterior of 130 Cedar Street and to gauge the potential for release to the environment, JLC and Masterworks need to provide information on what other contaminants, in addition to asbestos, may be contained in the dust/debris found inside and outside of the 130 Cedar Street building.

(c) For clarity, the inspection and sampling recommended above should not be limited to interior dust/debris on the floors and window sills within the building as previously done, and documented in the Dust Report, but should also include the interior and exterior of the building.

(4) If hazardous wastes are present in the 130 Cedar Street building, or expected to be generated in the abatement and/or deconstruction (i.e., other than lead-based paint waste), a survey of such wastes should be developed and included in the deconstruction plan. Additionally, it should be noted that hazardous waste notification to EPA is required both for lead-based paint waste that exhibits the Toxicity Characteristic (at 40 C.F.R. 262.24) and any other hazardous waste generated at the site. This notification is covered implicitly, but not mentioned directly, in the Lead-Based Paint Removal Specifications provided. The specifications should be revised to include a discussion of the required notification. Further, it should be noted that pursuant to the Resource Conservation and Recovery Act (RCRA) either the contractor or the building owner may be the generator for purposes of the notification to EPA.

(5) Masterworks and its contractors should utilize best management practices in all phases of the abatement and deconstruction for 130 Cedar Street so as to prevent any releases of asbestos, hazardous waste or hazardous waste constituents into the environment, which may threaten public health and the environment.

(6) Masterworks should ensure the implementation of appropriate identification and management practices for hazardous wastes, hazardous waste constituents and materials, and asbestos-containing materials throughout the abatement and deconstruction activities.

(7) Masterworks should ensure that its contractors comply with all applicable occupational regulations and best management practices to protect the health and safety of the workers.

(8) The proposed air monitoring plan is not acceptable in its current form. The air monitoring plan is fragmented into more than one plan, and it is unclear which plan, or which specific elements of each plan, would be followed during the abatement and deconstruction work. The separate plans must be merged into one comprehensive air monitoring plan and resubmitted so that the adequacy of that monitoring plan can be assessed.

(9) The Air Protocol does not mention any procedures for visible observation of emissions, the actions that will be taken if visible emissions are observed during the abatement phase and the deconstruction phase, and who would be notified if visible emissions are observed. The following recommendations should be included:

(a) For the abatement phase, during each work shift some entity should be tasked with observing 130 Cedar Street's containment barriers and exterior. Special attention should be paid to established isolation barriers and area(s) of high emission potential to identify any visible emissions.

(b) If any visible emission is noted on the exterior of the work area, work should be stopped and an immediate evaluation of in-place engineering controls for the emission location by some entity should take place. The evaluation may include, but is not limited to, work activities and smoke testing of the isolation barriers. Any damaged or malfunctioning engineering control should be repaired immediately. Work should not be restarted until engineering controls are repaired or determined to be functioning properly.

(c) For the deconstruction phase, during each work shift some entity should observe deconstruction operations to monitor visible dust in the air and suppression measures being applied by the deconstruction contractor. Depending on the severity and duration of dust condition, the owner or entity representing 130 Cedar Street's owner may order a stoppage of the work or require modified work practices to reduce visible dust.

(d) For both the abatement and deconstruction phases, EPA Region 2 and the New York City Department of Environmental Protection (NYCDEP) should be notified, as promptly as reasonably possible, of any visible emissions observed to cross the property line of 130 Cedar Street, and the owner or entity representing 130 Cedar Street's owner should subsequently promptly notify EPA Region 2 and NYCDEP of the corrective actions taken in writing.

(10) All sampling results collected pursuant to the Air Protocol, in suitable electronic form, should be provided to USEPA Region 2 weekly and exceedances of action, alarm, and trigger levels should be reported based on a mutual agreement to be discussed further.

(11) EPA recommends the following change to the Building Façade Clean-Up Protocol specified in a January 19, 2005 fax from Nova Development Group, Inc. and the East Coast Haz Mat Removal, Inc. protocols noted in a fax dated January 26, 2005 for Building Façade Clean-Up and Building Interior Clean-up at 130 Cedar Street specified under the section, NYCDEP Filings. The 6th paragraph currently states: "All horizontal surfaces shall be cleaned of large bulk material by wetting..." The beginning of this sentence needs to state, "All horizontal surfaces shall be cleaned of visible dust or debris by wetting..."

(12) Drawings D1-1 and D1-2 have a "general note" that states, "remove plywood window covers in work area. Restore window covers nightly at locations where entry to the building is possible." How is containment to be accomplished if such a practice is specified in the contractor's general notes for construction practices for this project? Window covers must not be removed during the abatement and deconstruction activities until clearance levels have been met and demonstrated to the regulatory community.

(13) (a) No information has been provided on the amount of, and level of contaminants found within, WTC dust and debris from interstitial spaces at the 130 Cedar Street building. Such information needs to be provided since there is concern that there may be contaminants of potential concern in the interstitial spaces at 130 Cedar Street which will be exposed during the

deconstruction activities and such contaminants would potentially be similar in nature and extent to contamination in other areas of the building.

(b) The deconstruction work to be conducted at 130 Cedar Street involves a large amount of demolition/removal of items such as: aluminum windows and frames, interior non-bearing partitions, elevator shaft enclosures, stairway enclosures, exterior brick parapets and face bricks, exterior concrete façade panels, masonry pilasters, masonry spandrel panels, non-bearing brick mullions, concrete columns and masonry walls, etc. The documents provided by JLC and Masterworks do not provide any details on the preventive measures that will be implemented to safeguard against the potential risk of releases of contaminants into the environment from the demolition/removal of these items, from within their respective interstitial spaces, and from the interstitial spaces between these components slated for demolition/removal and the building components to be left in-place.

B. Significant Elements Needed in the Air Sampling and Monitoring Protocol

Although EPA cannot fully assess the adequacy of the Air Protocol until EPA has an opportunity to review the additional information requested by EPA in this comment letter, there are several significant elements which need to be addressed as part of the Air Protocol that EPA can identify to date:

Introduction

(14) The Introduction section should provide a summary of planned activities in the building so that the monitoring program can be considered in context of this proposed work. For instance, as the Introduction Section is currently written, it is unclear what the nature and scope of deconstruction will be at 130 Cedar Street.

(15) Explain the “level 4” sampling work with regards to monitoring at various points outside of the project boundary. The Air Protocol appears to provide limited information on the level 2 and level 3 sampling that JLC will be collecting for 130 Cedar Street. Information will need to be provided on the level 4 sampling.

(16) No information is provided on the potential locations, and number of location points, for the sampling that JLC will be conducting outside of the isolation barriers of the work area that is discussed as part of the level 2 sampling.

(17) Information will need to be provided on the “level 1” sampling that will be conducted by personnel performing deconstruction work and collecting personal air samples.

Background

(18) The Background Section should contain a summary of what is known about existing contamination in the building so that the monitoring program can be considered in context of what is present at 130 Cedar Street. Reference to what was found in an adjoining building does

not adequately describe the extent and nature of contamination at 130 Cedar Street.

(19) The third bullet item should specify that the objective of sampling for target compounds is, “to gauge migration, if any, of contaminants from the site,” as JLC specified for the second bullet item with regards to conducting real time monitoring.

(20) The acronym for “contaminants of potential concern” noted in the first paragraph of the Background section should be “COPC” not “CPOC”.

Methodology

(21) The location and specifications for the proposed meteorological station should be provided. Local monitoring data from a nearby National Weather Service (NWS) station should also be provided.

(22) The specific sampling and analytical methods, frequency of sampling, detection limits, laboratory and reporting turn around times for each analyte should be provided.

(23) Fine particulates (PM_{2.5}) sampling is necessary and should be added to the monitoring list. Deconstruction equipment and processes will generate PM_{2.5}. It is essential that these emissions be controlled because of known health effects due to such particles.

(24) The location and elevation of the exterior perimeter monitor that will be adjacent to 130 Cedar Street on the downwind side of established prevailing winds should be provided.

(25) (a) This section indicates that three out of the four corners of the 130 Cedar Street building will be used as possible sampling locations for exterior perimeter sampling (i.e., the southeast, southwest, and northwest corners at ground level). The Northeast corner of 130 Cedar Street should be considered as a potential exterior sampling location as well.

(b) What is the relationship between the projected work, and the location of the exterior sampling locations, for 130 Cedar Street and the air intakes for the 90 West Street building?

(26) There is no mention of air monitoring locations on the roof of 130 Cedar Street even though the protocol indicates that roof and exterior façade work will be conducted. Please clarify.

(27) The text seems to imply under the subsection, “Sampling Sites”, that the exterior perimeter sampling will be conducted only during exterior deconstruction activities (i.e., façade removal). It is recommended that the exterior perimeter sampling also be conducted during the abatement stage(s), the interior deconstruction phase, and during the roof renovations.

(28) We understand that asbestos analysis by phase contrast microscopy (PCM) would be required to satisfy any OSHA requirements within the building; however, in order to characterize the interior and exterior of 130 Cedar Street and to gauge the potential for release to the environment, transmission electron microscopy (TEM) analysis will be necessary for all asbestos background, clearance, and exterior sampling.

(29) Specify the metals which will be sampled and analyzed during the abatement and deconstruction phases. Note: It's not clear whether the same metals listed in the interior background wipe sampling subsection will also be sampled during abatement and deconstruction air sampling.

(30) Assuming the metals listed in the interior background wipe sampling subsection will also be sampled during air sampling, the following additional analytes should be added to the monitoring program during exterior perimeter monitoring based upon previous analysis of WTC dust and potential contaminants which may be released during demolition activities: antimony, barium, beryllium, chromium, and nickel.

(31) The wipe samples designated for RCRA constituents under the Interior Background Samples and Clearance Samples subparts of Section 3(D) of the Air Protocol are not necessary from a RCRA waste identification perspective. However, for the purpose of RCRA waste identification, the generator must determine whether each waste exhibits any of the hazardous waste characteristics at 40 C.F.R. Part 261, Subpart C, or is a listed hazardous waste at 40 C.F.R. Part 261, Subpart D. The generator should also be aware of the 40 C.F.R. Part 273 requirements for universal waste management, which include alternate provisions for the management of such materials as lamps, batteries, and mercury thermostats.

Sampling Phases

(i) exterior background samples

(32) The one day background sampling period is insufficient to adequately determine background concentrations. Continuous and Federal Reference Method (FRM) particulate monitors should operate on-site for at least a one (1) week period prior to beginning any work at 130 Cedar Street. All other exterior background sampling for contaminants of concern should operate for a three (3) day period.

(33) In addition to a co-located PM₁₀ FRM monitor, include a co-located PM_{2.5} monitor. Information from the monitors should be used to trigger action levels and help in estimating the contribution of the deconstruction work to contaminants in the ambient air.

(34) This subsection indicates that metals will be sampled. However, there is no mention of what metals will be sampled. Please specify the list of metals that will be sampled.

(35) PCM analysis is not acceptable for asbestos for environmental sampling purposes of the exterior background, TEM analysis will be necessary for this goal. In addition, 100% of the total samples should be analyzed by TEM as opposed to the 5% of the total currently specified in the protocol.

(36) The protocol indicates that the exterior background sampling will be conducted prior to the commencement of deconstruction activities. Since abatement activities will be conducted first,

this sampling should be conducted prior to the commencement of abatement activities.

(ii) interior background samples

(37) The specific locations, sample methodology, types of samples, and number of samples to be collected at each location should be specified.

(38) PCM analysis is not acceptable for asbestos for environmental sampling purposes for the interior background, TEM analysis will be necessary for this goal. In addition, 100% of the total samples should be analyzed by TEM as opposed to the 5% of the total currently specified in the protocol.

(39) The protocol indicates that the interior background sampling will be conducted prior to the commencement of deconstruction activities. Since abatement activities will be conducted first, this sampling should be conducted prior to the commencement of abatement activities.

(40) It is noted in the protocol that sampling for PCB analysis will be collected as part of the exterior background sampling, continuous/during sampling, and the interior clearance wipe sampling. However, it was observed that sampling for PCB analysis will not be collected during the initial interior background wipe sampling activities prior to the commencement of the abatement phase of the project. What is the rationale for including PCB sampling and analysis in all of the other various sampling stages but not in the interior background sampling event?

(iii) continuous/during samples

(41) PM_{2.5} monitoring is necessary as well and should be added to the list of compounds to be sampled.

(42) PCM analysis is not acceptable for asbestos for environmental sampling purposes for the continuous/during sampling period, TEM analysis is necessary for this goal. In addition, 100% of the total samples should be analyzed by TEM as opposed to the 5% of the total currently specified in the protocol. We understand that NYCDEP typically requests asbestos samples for the duration of every work *shift* as opposed to a set eight (8) hour period and once a day during non-work days during the abatement phase.

(43) This subsection indicates that metals will be sampled. However, there is no mention of what metals will be sampled. Please specify the list of metals that will be sampled. In addition, see comment #30, above, for additional metal analytes that are necessary.

(44) The continuous/during samples subsection seems to only discuss the sampling that will be conducted at the exterior of 130 Cedar Street. However, there is no mention of what will be conducted in the interior of 130 Cedar Street during the continuous/during sampling phase. Please specify details for this phase.

(iv) clearance samples

(45) PCM analysis is not acceptable for asbestos for environmental sampling purposes to gauge the potential for release to the environment, TEM analysis will be necessary for this goal. In addition, 100% of the total samples should be analyzed by TEM as opposed to the 5% of the total currently specified in the protocol.

(46) Air sampling for metals should be conducted as part of the clearance air sampling in addition to the asbestos air sampling currently specified in the protocol. Please specify the list of metals that will be sampled. In addition, see comment #30, above, for additional metal analytes that are necessary.

(47) No clearance values are proposed. Clearance values should be provided and the rationale for their selection should be provided. Further, the clearance levels should be qualified with the specific actions that will be taken if any sample is above any of these clearance levels. Lastly, JLC should clarify in this subsection that the clearance sampling is being conducted at the end of the abatement phase to determine if 130 Cedar Street can be removed from containment and progress to the deconstruction phase of the project.

(48) This subsection indicates that interior wipe samples for RCRA metals will be collected and refers to a previous subsection on background sampling. Does this reference imply that the list of RCRA metals to be sampled will be the same? If so, for clarity please specify in the clearance sampling subsection the complete list of metals in this subsection.

(49) The acronym for “Polycyclic Aromatic Hydrocarbons” noted in the second paragraph of the clearance samples subsection should be “PAHs” not “PHA’s”.

Sampling and Monitoring

(50) Although some degree of detail is provided here on the methods to be used, insufficient detail regarding air sampling methodology is provided in this section. See EPA’s comments on the Methodology Section of the Air Protocol for some of the minimum information, but not all, that is necessary for an acceptable QA/QC plan. In addition, the PM_{2.5} sampling method and NIOSH method 7402 “asbestos by TEM” will need to be incorporated into this section and any QA/QC plan.

(51) Item #5 in this subsection mentions a fibrous glass sampling method using NIOSH 7400. However, there was no mention anywhere in the Air Protocol that fibrous glass sampling would be conducted. Will JLC be conducting fibrous glass sampling? If so, at what stage(s) of the various sampling phases discussed in the protocol will this sampling be conducted? If this sampling is to be conducted, what is the purpose of this sampling? Will JLC be attempting to distinguish between asbestos and man-made vitreous fibers (MMVF)? If so, what was JLC’s rationale for using the NIOSH 7400 fiber counting method for MMVF analysis as opposed to Scanning Electron Microscopy (SEM)?

QA\QC

(52) A QA\QC plan was described but was not submitted. A QA/QC plan should be submitted for review.

Alarm and Action Levels

(53) The first sentence of this subsection indicates that “the goal of the air sampling and monitoring protocol is to ensure the deconstruction operations at 130 Cedar Street do not have a negative impact on the airborne environment of the surrounding community”. This sentence should be revised to also note that it is to ensure that the *abatement* operations, in addition to the deconstruction operations, do not impact the air within the surrounding community.

(54) (a) No alarm or action levels are provided. Action levels for analytes such as PM_{2.5}, PM₁₀, asbestos, and other potential contaminants of concern must be included for review by EPA prior to initiation of any work. The procedures for notification to EPA of an exceedance of an action level must be provided. The notification should define the level of the exceedance, the potential source(s), the type of response, and the time frame for response to the exceedance. Action levels are also needed for modification of engineering controls/ work practices, as well as for work stoppage in response to an exceedance so as to protect the public health and environment.

(b) EPA has Specific Trigger Levels that should be utilized when establishing the action levels for 130 Cedar Street that are set forth below. The activities associated with exceedance of any EPA-endorsed "trigger levels" should be clearly articulated in conjunction with the procedures for notification for any exceedance of an action level for 130 Cedar Street.

Analyte	EPA Site Specific Trigger Levels
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Metals

Antimony	14 ug/m ³
Barium	5 ug/m ³
Beryllium	0.2 ug/m ³
Cadmium	2 ug/m ³
Chromium	60 ug/m ³
Chromium VI	0.6 ug/m ³
Copper	100 ug/m ³
Lead	5 ug/m ³
Manganese	0.5 ug/m ³
Mercury	3 ug/m ³
Nickel	28 ug/m ³
Zinc	160 ug/m ³

Particles and Dusts

Asbestos	70 S/mm ² (TEM AHERA structures) ¹
Particulate PM-10 (24 hour average)	150 ug/m ³

Analyte	EPA Site Specific Trigger Levels
Particulate PM-2.5 (24 hour average)	65 ug/m ³
Respirable Silica (crystalline)	10 ug/m ³

Organics (semi-volatiles)

Dioxins/Furans (2,3,7,8 – TCDD equiv.)	0.025 ng/m ³
PCB (total Aroclors)	12 ug/m ³
PAH (benzo-a-pyrene equivalent)	3.4 ug/m ³

¹ Evaluation of samples using TEM AHERA is pursuant to requirements of NYCDEP and NYS DOL. Minimum air sample volume is 1200 liters.